

REMARKS

Claims 2-6, 8, 9, 11-24 and 27 are currently pending in the present application. Claims 5, 6, 8, 9, 16 and 17 are withdrawn from consideration. Claims 2, 12 and 27 have been amended herein. Support for the present claim amendments may be found in the specification, at least, at page 5, lines 7-13.

Rejections under 35 U.S.C. §103 – Obviousness

Claims 2-4, 11-15 and 19-24 stand rejected under 35 U.S.C. § 103 as being unpatentable over Sato in view of Lyon and Tateno.

Claim 27 stands rejected under 35 U.S.C. § 103 as being unpatentable over Sato in view of Lyon and Tateno, and further in view of Kishi.

In order to further distinguish the present invention from the cited prior art, Applicants have amended the claims to recite that “***the phosphate glass has a softening point of 550°C or lower***” (emphasis added), which is taught in the present specification at page 5, lines 7-13 as a preferred range.

In the outstanding Office Action, the Examiner refers to the disclosure in Lyon regarding the softening point being around 590 Celsius. The Examiner also refers to Tateno to disclose that the softening point of phosphate glass ranges from 400-800 Celsius. In the Office Action, Lyon is combined with Tateno since Lyon “teaches that it is known for use as a slag trap with gas generating compositions” and Tateno suggests phosphate glass because of its disclosure of the softening point thereof (see Office Action at page 2, fifth paragraph). Also, the Examiner refers to how Sato discloses “conventional slag traps”. However, the rationale for combining the three references has been removed in light of the present amendment of the claims.

The presently claimed invention now recites that the phosphate glass has **a softening point of 550°C or lower**. This is clearly different from the Lyon disclosure. In fact, Lyon now

teaches away from the presently claimed invention. While the Examiner has stated that Tateno suggests that the softening point is from 400-800 °C, Applicants note that the Examiner stated that “*Tateno is utilized merely to show the softening point of phosphate glass, which is relevant to the art since Lyon suggests that glass with a softening point around 590°C can be used as a slag trap in gas generating compositions.*” See Office Action, page 4, first full paragraph.

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984) (emphasis in original). A *prima facie* case of obviousness may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997). It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983).

Here, as discussed above, the Lyon reference teaches away from the present invention in a material respect. Moreover, while the Tateno reference may disclose that the softening point of phosphate glass encompasses a broad range (i.e., 400-800 °C), this does not negate the teaching of Lyon. One of ordinary skill considering the proposed combination of cited prior art would not arrive at the presently claimed invention, absent the benefit of hindsight reconstruction, which is not permitted. Thus, in light of the noted distinction between the phosphate glass of the present invention and that of the Lyon reference, the proposed combination of Sato, Lyon and Tateno, cannot be combined to arrive at the present claimed invention.

A suggestion or motivation to combine references is an appropriate method for determining obviousness, however it is just one of a number of valid rationales for doing so. The Court in *KSR* identified several exemplary rationales to support a conclusion of obviousness which are consistent with the proper "functional approach" to the determination of obviousness as laid down in *Graham*. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).

As the M.P.E.P. directs, all claim limitations must be considered in view of the cited prior art in order to establish a *prima facie* case of obviousness. *See* MPEP § 2143.03.

MPEP § 2143.03 recites examples of basic requirements of a *prima facie* case of obviousness and seven exemplary rationales: (A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods or products) in the same way; (D) Applying a known technique to a known device (method or product) ready for improvement to yield predictable results; (E) "Obvious to try"; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; and (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Applicants respectfully submit that the Examiner has not met the basic requirements of establishing a *prima facie* case of obviousness. More specifically, Applicants contend that none of the rationale (A) – (G) above is applicable in the present application.

Accordingly, Applicants respectfully request that each of the outstanding rejections be withdrawn.

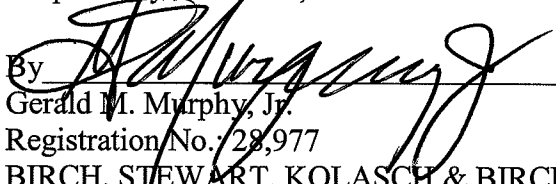
In view of the foregoing, Applicants believe the pending application is in condition for allowance. A Notice of Allowance is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Monique T. Cole, Reg. No. 60,154 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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